

Mr. Ron Terrell  
Milestone Contractors, L.P.  
P.O. Box 421459  
Indianapolis, Indiana 46242-1459

Re: 005-15124  
Second Significant Permit Revision to  
FESOP 005-5503-00052

Dear Mr. Terrell:

Milestone Contractors, L.P. was issued a permit on December 9, 1996 for a hot mix asphalt concrete manufacturing operation. A letter requesting changes to this permit was received on December 7, 2001. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the construction of a new recycled asphalt pavement (RAP) dryer/burner and drum mixer at their existing asphalt plant. This would allow the RAP to be heated prior to placement in the existing drum mixer. There would be no changes to the existing equipment, however, the source also requested that the maximum asphalt mix throughput of the plant be increased from 400 tons per hour to 450 tons per hour.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Trish Earls, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (973) 575-2555, ext. 3219 or dial (800) 451-6027, press 0 and ask for extension 3-6878.

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments

TE/EVP

cc: File - Bartholomew County  
U.S. EPA, Region V  
Bartholomew County Health Department  
Air Compliance Section Inspector - D.J. Knotts  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michelle Boner

# FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 1-800-451-6027

**Milestone Contractors, L.P.**  
**5245 North Indianapolis Road**  
**Columbus, Indiana 47201**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F005-5503-00052	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

First Administrative Amendment 005-8416-00052, issued April 18, 1997;  
First Significant Permit Modification 005-8078-00052, issued June 18, 1997;  
Second Administrative Amendment 005-9748-00052, issued June 9, 1998;  
Third Administrative Amendment 005-9907-00052, issued December 1, 1998; and  
Fourth Administrative Amendment 005-10482-00052, issued January 14, 1999.

Second Significant Permit Revision: 005-15124	Pages Affected: 4, 22-26, 26a, 27, 31-33, 33a
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 18, 2002

## SECTION A SOURCE SUMMARY

### A.1 General Information

The Permittee owns and operates a hot mix asphalt concrete manufacturing operation

Responsible Official: Ron Terrell, Senior Manager of Asphalt Plants  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
Mailing Address: P.O. Box 421459, Indianapolis, Indiana 46242-1459  
SIC Code: 2951  
County Location: Bartholomew  
County Status: Attainment for all criteria pollutants  
Source Status: Synthetic Minor Source, FESOP Program

### A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

- (a) one (1) aggregate counter-flow drum mixer, identified as emission unit No. 2, with a maximum capacity of 450 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner with a maximum rated capacity of 135 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1, one (1) draglat conveyor, three (3) feed conveyors, and one (1) screen;
- (b) cold-mix (stockpile mix) asphalt storage piles; and
- (c) one (1) aggregate counter-flow recycled asphalt pavement (RAP) drum mixer, identified as emission unit No. 30, with a maximum capacity of 225 tons per hour, equipped with one (1) natural gas fired RAP dryer burner with a maximum rated capacity of 75.6 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.

### A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) one (1) distillate No. 2 fuel oil fired liquid asphalt tank heater, identified as emission unit No. 13, rated at 1.3 MMBtu per hour, exhausting at two (2) stacks, identified as S-2A and S-2B;
- (b) two (2) distillate No. 2 fuel oil fired liquid asphalt tank heaters, identified as emission unit Nos. 15 and 17, rated at 0.45 MMBtu per hr each, and each exhausting at two (2) stacks, identified as S-4A, S-4B, S-6A, and S-6B;
- (c) three (3) liquid asphalt storage tanks, identified as Tank 12, Tank 14, and Tank 16, each with a maximum storage capacity of 26,000 gallons;
- (d) aggregate storage piles;
- (e) four (4) hot mix asphalt cement storage silos each with a maximum storage capacity of 300 tons;
- (f) one (1) cold feed bin consisting of eight (8) compartments;
- (g) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons;
- (h) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (i) one (1) natural gas fired space heater rated at 0.1 MMBtu per hr located in the laboratory;
- (j) combustion source flame safety purging on startup;
- (k) application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;

## SECTION D.1

## FACILITY OPERATION CONDITIONS

one (1) aggregate counter-flow drum mixer, identified as emission unit No. 2, with a maximum capacity of 450 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner with a maximum rated capacity of 135 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.

one (1) drag-slat conveyor, three (3) feed conveyors, and one (1) screen.

one (1) aggregate counter-flow recycled asphalt pavement (RAP) drum mixer, identified as emission unit No. 30, with a maximum capacity of 225 tons per hour, equipped with one (1) natural gas fired RAP dryer burner with a maximum rated capacity of 75.6 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.

### Emissions Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 6-3] [326 IAC 12] [40 CFR Part 60.90]

#### D.1.1 Particulate Matter [326 IAC 12][40 CFR 60.92, Subpart I]

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the particulate matter emissions from the aggregate and RAP mixing and drying operations exhausting through stack S-1, shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf). This is equivalent to a particulate matter emission rate of 15.45 pounds per hour.

#### D.1.2 Particulate Matter 10 Microns (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation and the RAP mixing and drying operation, both exhausting through stack S-1, shall not exceed 18.34 pounds per hour, including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

#### D.1.3 Opacity [326 IAC 12][40 CFR 60.92, Subpart I]

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the aggregate and RAP mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20 percent opacity or greater.

#### D.1.4 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer shall each be limited to 0.5 pounds per million Btu heat input or a sulfur content of less than or equal to 0.5 percent when using distillate oil. Also, the sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer shall each be limited to 1.6 pounds per million Btu heat input or a sulfur content of less than or equal to 1.31 percent when using re-refined waste oil. This source has accepted a sulfur content limit of 0.75 percent when using re-refined waste oil.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction.

**D.1.5 Natural Gas Usage [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the input of natural gas to the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer shall be limited, in total, to 697.0 million cubic feet (MMCF) per twelve (12) consecutive month period, rolled on a monthly basis. For purposes of determining compliance, the following shall apply:

- (a) every 1,000 gallons of No. 2 distillate fuel oil burned in the aggregate dryer burner shall be equivalent to 0.0857 MMCF of natural gas based on NO<sub>x</sub> emissions such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified;
- (b) every 1,000 gallons of re-refined waste oil burned in the aggregate dryer burner shall be equivalent to 0.0679 MMCF of natural gas based on NO<sub>x</sub> emissions such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified;
- (c) every 1,000 gallons of No. 2 distillate fuel oil burned in the RAP dryer burner shall be equivalent to 0.2 MMCF of natural gas based on NO<sub>x</sub> emissions such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified; and
- (d) every 1,000 gallons of re-refined waste oil burned in the RAP dryer burner shall be equivalent to 0.19 MMCF of natural gas based on NO<sub>x</sub> emissions such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified.

Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.6 Re-refined Waste Oil Usage [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the input of re-refined waste oil to the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer shall be limited, in total, to 1,707, 211 U.S. gallons per twelve (12) consecutive month period, rolled on a monthly basis based on a maximum oil sulfur content of 0.75%. The sulfur content of the re-refined waste oil used in the 135 MMBtu per hour burner for the aggregate dryer and the 75.6 MMBtu per hour burner for the RAP dryer shall not exceed 0.75 percent. For purposes of determining compliance, the following shall apply:

- (a) every 1,000 gallons of No. 2 distillate fuel oil burned in the aggregate dryer burner shall be equivalent to 711.7 gallons of re-refined waste oil based on SO<sub>2</sub> emissions and a maximum sulfur content of 0.5% such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified;
- (b) every MMCF of natural gas burned in the aggregate dryer burner or in the RAP dryer burner shall be equivalent to 5.4 gallons of re-refined waste oil based on SO<sub>2</sub> emissions such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.
- (c) every 1,000 gallons of No. 2 distillate fuel oil burned in the RAP dryer burner shall be equivalent to 643.7 gallons of re-refined waste oil based on SO<sub>2</sub> emissions and a maximum sulfur content of 0.5% such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.7 Recycled Asphalt Pavement (RAP) Throughput [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the throughput of recycled asphalt pavement (RAP) to the RAP dryer shall be limited to 1,769,520 tons per twelve (12) consecutive month period, rolled on a monthly basis. Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.8 Preventive Maintenance [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.

**Compliance Determination Requirements**

**D.1.9 Particulate Matter [326 IAC 12][40 CFR 60, 40 CFR 51]**

During the period no later than 180 days after start up of the RAP drum mixer and dryer or the throughput to the aggregate drum mixer is increased, whichever occurs first, in order to demonstrate compliance with conditions D.1.1, D.1.2, and D.1.3, the Permittee shall perform PM and PM-10 testing on the baghouse exhausting through stack S-1 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10.

**D.1.10 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 12][40 CFR 60]**

The Permittee shall test for:

- (a) Sulfur content of oil burned as fuel by the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer using 40 CFR Part 60, Appendix A, Method 19 for each load of oil delivered; or
- (b) Sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer, using 40 CFR Part 60, Appendix A, Method 6 each time a test to comply with Condition D.1.6 is performed.

Sulfur content tests may be made by the oil supplier.

**D.1.11 Used Oil Requirements [329 IAC 13-8]**

Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (1) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (2) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (3) Maintain records pursuant to 329 IAC 13-8-6 (Tracking).
- (4) The waste oil burned in the aggregate dryer/mixer burner and the RAP dryer/mixer burner shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). The burning of mixtures of used oil and hazardous waste that is regulated by 329 IAC 3.1 is prohibited at this source.

## **Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

### **D.1.12 Daily Visible Emissions Notations**

Daily visible emission notations of the conveyors, transfer points, aggregate storage piles, unpaved roads, and the aggregate and RAP mixing and drying operations stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

### **D.1.13 Pressure Drop Readings**

The Permittee shall take readings of the total static pressure drop across the baghouse controlling the aggregate and RAP mixing and drying operation, at least once a day when the mixing and drying process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with condition C.11 - Pressure Gauge Specifications, be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

### **D.1.14 Preventive Inspections**

The following inspections shall be performed when the aggregate and RAP mixing and drying operation is operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Daily (during operating season):

- (a) Check trickle valve (if applicable) for free operation.

Monthly (during operating season):

- (a) Check to see the tubes (if applicable) are not clogged or worn;
- (b) Check to see the settling chamber (if applicable) has no undue amount of accumulation;
- (c) Check the duct work for holes, wear, and tightness; and
- (d) Check the cyclone (if applicable) for wear.

Appropriate corrective actions shall be taken in accordance with Condition C.12.

### **D.1.15 Control Equipment Failure Detection**

In the event that failure of the control equipment has been observed:

- (a) The operation will be shut down as soon as practicable, as indicated in the Preventive Maintenance plan, until the controls have been repaired.

- (b) Based upon the findings of the inspection, any additional corrective actions will be devised within twelve (12) hours of discovery and will include a timetable for completion.

**D.1.16 Particulate Matter**

Pursuant to CP-005-2331, issued on April 14, 1992, the baghouse controlling the aggregate dryer and RAP dryer emissions shall be in operation at all times when the asphalt plant is in operation.

**D.1.17 Fuel Oil Sampling and Analysis [326 IAC 3-3]**

Oil samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. The Permittee shall analyze the oil sample to determine the sulfur content of the oil in accordance with 326 IAC 3-3-4. If a partially empty fuel tank is refilled, a new sample and analysis is required upon filling. Vendor analysis of each load delivered is acceptable, in lieu of the above, if accompanied by a certification.

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**D.1.18 Operational Parameters**

- (a) The Permittee shall maintain a daily record for the baghouse controlling particulate matter emissions from aggregate and RAP mixing and drying operations of the following values to document compliance with Conditions D.1.12 and D.1.13:
  - (1) Baghouse inlet temperature;
  - (2) Inlet and outlet differential static pressure;
  - (3) Visible observations;
  - (4) Checklist with dates and initials for each preventive action performed; and
  - (5) Records of corrective actions.
- (b) To document compliance with Condition D.1.14, the Permittee shall maintain records of the results of the inspections required under Condition D.1.14.

**D.1.19 Natural Gas Usage**

- (a) To document compliance with Condition D.1.5, complete and sufficient records shall be kept to establish compliance with the natural gas usage limit established in this permit and contain a minimum of the following:
  - (1) Calendar dates covered in the compliance determination period; and
  - (2) Monthly usage and calculated natural gas equivalent.

**D.1.20 Distillate and Residual Fuel Oil Usage**

- (a) To document compliance with Conditions D.1.4 and D.1.6, complete and sufficient records shall be kept to establish compliance with the re-refined waste oil usage limits and sulfur dioxide emission limit established in this permit and contain a minimum of the following:
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Monthly usage and calculated re-refined waste oil equivalent;

- (3) A certification (if available), signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
  - (4) Fuel supplier certifications (if available).
- (b) The supplier certification (if available) shall contain, as a minimum, the following:
  - (1) The name of the oil supplier; and
  - (2) A statement from the oil supplier that certifies the sulfur content and heat content of the fuel oil.

D.1.21 Recycled Asphalt Pavement (RAP) Throughput

- (a) To document compliance with condition D.1.7, complete and sufficient records shall be kept to establish compliance with the recycled asphalt pavement (RAP) throughput limit for the RAP dryer established in this permit and contain a minimum of the following:
  - (1) Calendar dates covered in the compliance determination period; and
  - (2) Monthly RAP throughput to the RAP dryer.

D.1.22 Quarterly Reporting

A quarterly summary to document compliance with operation conditions numbers D.1.5, D.1.6, and D.1.7 shall be submitted, to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

cold-mix (stockpile mix) asphalt storage piles, consisting of gelled asphalt containing 1 percent distillate oil by volume.

### Emissions Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 8-5-2]

#### D.2.1 Volatile Organic Compound (VOC)

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7 percent) oil distillate by volume of emulsion for any paving application except the following purposes:

- 1) penetrating prime coating
- 2) stockpile storage
- 3) application during the months of November, December, January, February and March.

#### D.2.2 Cold-Mix (Stockpile Mix) Asphalt Concrete Usage

Gelled asphalt with VOC solvent liquid binder used in the production of cold mix asphalt shall not exceed 2,886 tons of VOC solvent per twelve (12) consecutive month period. This is equivalent to limiting the VOC emitted from solvent use to 72.16 tons per twelve (12) consecutive month period, based on the following definition:

Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.

Therefore, the requirements of 326 IAC 2-7 will not apply.

### Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

#### D.2.3 Record keeping Requirements

To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.2.2.

- (a) Calendar dates covered in the compliance determination period;
- (b) Gelled asphalt binder usage per month since the last compliance determination period;
- (c) VOC solvent content by weight of the gelled asphalt binder used each month; and
- (d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

The records shall be maintained for a minimum period of 36 months and made available upon request of the Office of Air Quality (OAQ).

#### D.2.4 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.2.2 shall be submitted, to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
FESOP Quarterly Report**

Source Name: Milestone Contractors, L.P.  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
FESOP No.: F005-5503-00052  
Facility: 135 million Btu per hour burner for the aggregate dryer and 75.6 MMBtu per hour burner for the RAP dryer  
Parameter: sulfur dioxide (SO<sub>2</sub>)

**Limits:**

sulfur content of No. 2 distillate fuel not to exceed 0.5%; sulfur content of re-refined waste oil not to exceed 0.75%; and 1,707,211 gallons of re-refined waste oil and re-refined waste oil equivalent per last 12 consecutive month period. For purposes of determining compliance with this limit, the fuel equivalency ratios in condition D.1.6(a) through (c) shall be used such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

YEAR: \_\_\_\_\_

Month	Column 1		Column 2		Column 1 + Column 2	
	Re-refined waste oil and equivalent usage this month (gallons)		Re-refined waste oil and equivalent usage previous 11 months (gallons)		12 month total Re-refined waste oil and equivalent usage (gallons)	
	Waste Oil	Equiv.	Waste Oil	Equiv.	Waste Oil	Equiv.
Month 1						
Month 2						
Month 3						

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
FESOP Quarterly Report**

Source Name: Milestone Contractors, L.P.  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
FESOP No.: F005-5503-00052  
Facility: 135 million Btu per hour burner for the aggregate dryer and 75.6 MMBtu per hour burner for the RAP dryer  
Parameter: oxides of nitrogen (NO<sub>x</sub>)

Limits:

697.0 million cubic feet (MMCF) of natural gas and natural gas equivalents per last twelve (12) consecutive month period. For purposes of determining compliance with this limit, the fuel equivalency ratios in condition D.1.5(a) through (d) shall be used such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified.

YEAR: \_\_\_\_\_

Month	Column 1		Column 2		Column 1 + Column 2	
	Natural gas and equivalent usage this month (MMCF)		Natural gas and equivalent usage previous 11 months (MMCF)		12 month total Natural gas and equivalent usage (MMCF)	
	Natural Gas	Equiv.	Natural Gas	Equiv.	Natural Gas	Equiv.
Month 1						
Month 2						
Month 3						

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Milestone Contractors, L.P.  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
FESOP No.: F005-5503-00052  
Facility: cold-mix (stockpile mix) asphalt  
Parameter: volatile organic compounds (VOC)  
Limit: Gelled asphalt with VOC solvent liquid binder used in the production of cold mix asphalt shall not exceed 2,886 tons of VOC solvent per twelve (12) consecutive month period. This is equivalent to limiting the VOC emitted from solvent use to 72.16 tons per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Total VOC Solvent Usage This Month (tons)	Total VOC Solvent Usage Previous 11 Months (tons)	12 Month Total VOC Solvent Usage (tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Milestone Contractors, L.P.  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
FESOP No.: F005-5503-00052  
Facility: RAP dryer  
Parameter: Total HAPs  
Limit: The throughput of recycled asphalt pavement (RAP) to the RAP dryer shall be limited to 1,769,520 tons per twelve (12) consecutive month period, rolled on a monthly basis.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	RAP Throughput This Month (tons)	RAP Throughput Previous 11 Months (tons)	12 Month Total RAP Throughput (tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for a Permit Revision to a Federally Enforceable State Operating Permit

Source Name:	Milestone Contractors, L.P.
Source Location:	5245 North Indianapolis Road, Columbus, IN 47201
County:	Bartholomew
SIC Code:	2951
Operation Permit No.:	F 005-5503-00052
Operation Permit Issuance Date:	December 9, 1996
Permit Revision No.:	005-15124-00052
Permit Reviewer:	Trish Earls/EVP

On February 6, 2002, the Office of Air Quality (OAQ), had a notice published in The Republic, Columbus, Indiana, stating that Milestone Contractors, L.P. had applied for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP) to request approval to construct and operate a recycled asphalt pavement (RAP) dryer/burner and drum mixer at the existing drum mix asphalt pavement production plant. The notice also stated that the OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. To better identify the applicable section of the New Source Performance Standard, 40 CFR Part 60, Subpart I, the rule cite in conditions D.1.1 and D.1.3 have been revised as follows:
  - D.1.1 Particulate Matter [326 IAC 12][40 CFR 60.902, Subpart I]  
Pursuant to 326 IAC 12, (40 CFR Part 60.902, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the particulate matter emissions from the aggregate and RAP mixing and drying operations exhausting through stack S-1, shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf). This is equivalent to a particulate matter emission rate of 15.45 pounds per hour.
  - D.1.3 Opacity [326 IAC 12][40 CFR 60.902, Subpart I]  
Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the aggregate and RAP mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20 percent opacity or greater.
2. Condition D.1.5, Natural Gas Usage, contains a natural gas and equivalent usage limit for the aggregate dryer burner and RAP dryer burner based on NOx emissions so that NOx emissions will be limited to less than 100 tons per year. Since the sulfur content of the fuel oil burned in the aggregate dryer burner and RAP dryer burner does not affect NOx emissions, it is not necessary to specify a maximum sulfur content of the fuel oil in condition D.1.5. Therefore, condition D.1.5 is revised to read as follows:

**D.1.5 Natural Gas Usage [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the input of natural gas to the 135 million Btu per hour burner for the aggregate dryer and the 75.6 million Btu per hour burner for the RAP dryer shall be limited, in total, to 697.0 million cubic feet (MMCF) per twelve (12) consecutive month period, rolled on a monthly basis. For purposes of determining compliance, the following shall apply:

- (a) every 1,000 gallons of No. 2 distillate fuel oil burned in the aggregate dryer burner shall be equivalent to 0.0857 MMCF of natural gas based on NO<sub>x</sub> emissions ~~and a maximum oil sulfur content of 0.5%~~ such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified;
- (b) every 1,000 gallons of re-refined waste oil burned in the aggregate dryer burner shall be equivalent to 0.0679 MMCF of natural gas based on NO<sub>x</sub> emissions ~~and a maximum oil sulfur content of 0.75%~~ such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified;
- (c) every 1,000 gallons of No. 2 distillate fuel oil burned in the RAP dryer burner shall be equivalent to 0.2 MMCF of natural gas based on NO<sub>x</sub> emissions ~~and a maximum oil sulfur content of 0.5%~~ such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified; and
- (d) every 1,000 gallons of re-refined waste oil burned in the RAP dryer burner shall be equivalent to 0.19 MMCF of natural gas based on NO<sub>x</sub> emissions ~~and a maximum oil sulfur content of 0.75%~~ such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified.

Therefore, the requirements of 326 IAC 2-7 will not apply.

- 3. Since the source is going to increase the throughput to the aggregate drum mixer and construct a new RAP drum mixer and dryer burner, an initial stack test for PM and PM10 must be conducted within 180 days after start up of the RAP drum mixer and dryer burner or the throughput to the aggregate drum mixer is increased, whichever occurs first. The stack test will be used to demonstrate compliance with the PM and PM10 emission limits in conditions D.1.1, D.1.2, and D.1.3. Therefore, condition D.1.9 is revised to read as follows:

**D.1.9 Particulate Matter [326 IAC 12][40 CFR 60, 40 CFR 51]**

During the period ~~between 18 and 24 months after issuance of this permit~~ **no later than 180 days after start up of the RAP drum mixer and dryer or the throughput to the aggregate drum mixer is increased, whichever occurs first, in order to demonstrate compliance with conditions D.1.1, D.1.2, and D.1.3,** the Permittee shall perform PM and PM-10 testing **on the baghouse exhausting through stack S-1** utilizing methods ~~per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202,~~ as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Milestone Contractors, L.P.</b>
<b>Source Location:</b>	<b>5245 North Indianapolis Road, Columbus, IN 47201</b>
<b>County:</b>	<b>Bartholomew</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F005-5503-00052</b>
<b>Operation Permit Issuance Date:</b>	<b>December 9, 1996</b>
<b>Permit Revision No.:</b>	<b>005-15124-00052</b>
<b>Permit Reviewer:</b>	<b>Trish Earls/EVP</b>

The Office of Air Quality (OAQ) has reviewed a revision application from Milestone Contractors, L.P. relating to the construction and operation of a recycled asphalt pavement (RAP) dryer/burner and drum mixer at the existing stationary drum mix asphalt pavement production plant.

#### **History**

On December 7, 2001, Milestone Contractors, L.P. submitted an application to the OAQ requesting to add a new recycled asphalt pavement (RAP) dryer/burner and drum mixer to their existing asphalt plant. This would allow the RAP to be heated prior to placement in the existing drum mixer. There would be no changes to the existing equipment, however, the source also requested that the maximum asphalt mix throughput of the plant be increased from 400 tons per hour to 450 tons per hour. Milestone Contractors, L.P. was issued a FESOP on December 9, 1996. On March 8, 2001, the source submitted a FESOP renewal application which is still pending with IDEM.

#### **New Emission Units and Pollution Control Equipment**

The application includes information relating to the construction and operation of the following equipment:

- (a) one (1) aggregate counter-flow recycled asphalt pavement (RAP) drum mixer, identified as emission unit No. 30, with a maximum capacity of 225 tons per hour, equipped with one (1) natural gas fired RAP dryer burner with a maximum rated capacity of 75.6 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.

#### **Existing Approvals**

The source was issued a FESOP (F005-5503-00052) on December 9, 1996. The source has since received the following:

- (a) First Administrative Amendment 005-8416-00052, issued April 18, 1997;
- (b) First Significant Permit Modification 005-8078-00052, issued June 18, 1997;
- (c) Second Administrative Amendment 005-9748-00052, issued June 9, 1998;
- (d) Third Administrative Amendment 005-9907-00052, issued December 1, 1998; and
- (e) Fourth Administrative Amendment 005-10482-00052, issued January 14, 1999.

The source applied for a FESOP renewal on March 8, 2001.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

No new stacks have been added.

### Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 7, 2001.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (9 pages).

### Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

Pollutant	Potential To Emit (tons/year)
PM	33,906.13
PM-10	7,972.79
SO <sub>2</sub>	304.22
VOC	13.26
CO	27.81
NO <sub>x</sub>	52.43

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP	PTE (tons/year)
Arsenic	less than 10
Benzene	less than 10
Beryllium	less than 10
Cadmium	less than 10
Chromium	less than 10
Ethylbenzene	less than 10
Formaldehyde	less than 10
Hexane	less than 10
2,2,4 Trimethylpentane	less than 10
Lead	less than 10
Manganese	less than 10
Mercury	less than 10
Methyl Chloroform	less than 10
Nickel	less than 10
Selenium	less than 10
Toluene	less than 10
Total Polycyclic Organic Matter	less than 10
Xylene	less than 10
<b>TOTAL HAPs</b>	<b>less than 25</b>

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub>, SO<sub>2</sub>, CO and NO<sub>x</sub> from this modification are equal to or greater than 25 tons per year. Therefore, the FESOP is being revised through a Significant Permit Revision pursuant to 326 IAC 2-8-11.1. This FESOP Significant Permit Revision will give the source approval to construct and operate the new emission units.

### Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs <sup>(5)</sup>
Existing Aggregate Dryer and Burner and new RAP Dryer and Burner <sup>(1)</sup>	67.66 <sup>(2)</sup>	80.33 <sup>(3)</sup>	94.11	26.81	29.27	97.58	<25.0
Tank and space heaters	0.14	0.23	4.89	0.03	0.38	1.42	negligible
Conveying/Handling	4.04	1.91	-	-	-	-	-
Unpaved Roads	81.92	16.37	-	-	-	-	-
Aggregate Storage	0.46	0.16	-	-	-	-	-
Cold-mix VOC storage <sup>(4)</sup>	-	-	-	72.16	-	-	-
<b>Total Emissions</b>	<b>153.77</b>	<b>99.0</b>	<b>99.0</b>	<b>99.0</b>	<b>29.65</b>	<b>99.0</b>	<b>&lt;25.0</b>

- (1) Limited PTE reflects fuel usage limitations to comply with 326 IAC 2-8 (FESOP).  
(2) Maximum allowable PM emissions pursuant to 40 CFR 60.90, Subpart I.

- (3) Maximum allowable PM<sub>10</sub> emissions in order to comply with 326 IAC 2-8 (FESOP).
- (4) Maximum allowable VOC emissions in order to comply with 326 IAC 2-8 (FESOP).
- (5) Limited HAP emissions from aggregate dryer and RAP dryer represent emissions after a recycled asphalt pavement (RAP) throughput limitation of 1,769,520 tons per twelve (12) consecutive month period to the RAP dryer.

### County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Bartholomew County has been designated as attainment or unclassifiable for ozone.

### Federal Rule Applicability

- (a) This source is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I) because it meets the definition of a hot mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity. This is equivalent to a particulate matter emission rate of 15.45 pounds per hour. The source will comply with this rule by using a baghouse to limit particulate matter emissions to less than 0.04 gr/dscf (see Appendix A, page 6 of 9, for detailed calculations).
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

### State Rule Applicability - Entire Source

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source, constructed in 1992, is not subject to the requirements of this rule. Pursuant to FESOP No. F005-5503-00052, the existing source had a source-wide emission limit for all criteria pollutants of less than 250 tons per year making it an existing minor source under PSD. As shown in the Potential to Emit After Issuance table on page 3 above, the allowable emissions of all regulated pollutants from the existing emission units and the new emission units will remain less than 250 tons per year after application of all federally enforceable emission limits. Therefore, this rule does not apply.

#### 326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), which would require the source to submit an annual emission statement. Pursuant to this rule, any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. This source, which is located in Bartholomew County, has accepted federally enforceable operation conditions which limit emissions of PM-10, SO<sub>2</sub>, NO<sub>x</sub>, and VOC to below 100 tons per year per pollutant, therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, the usage of re-refined waste oil with a limited sulfur content of 0.75% and re-refined waste oil equivalents in the aggregate dryer burner and the RAP dryer burner shall be limited to 1,707,211 U.S. gallons per twelve (12) consecutive month period, rolled on a monthly basis, so that SO<sub>2</sub> emissions are limited to less than 100 tons per year. The usage of natural gas and natural gas equivalents in the aggregate dryer burner and the RAP dryer burner shall be limited to 697.0 million cubic feet (MMcf) per twelve (12) consecutive month period, rolled on a monthly basis, so that NO<sub>x</sub> emissions are limited to less than 100 tons per year. The use of gelled asphalt with solvent liquid binder shall not exceed 2,886 tons of VOC solvent per twelve (12) consecutive month period, rolled on a monthly basis, so that VOC emissions are limited to less than 100 tons per year. Also, total PM-10 emissions from the aggregate dryer and the RAP dryer, both of which exhaust through one (1) stack, identified as S-1, shall be limited to 18.34 pounds per hour. Based on 8,760 hours of operation per 12 consecutive month period, this limits total PM-10 emissions from the aggregate mixing and drying operation and the RAP mixing and drying operation to 80.33 tons per year for a source-wide total potential to emit of less than 100 tons per year. The source will comply with the PM-10 emission limit by utilizing a baghouse for controlling PM-10 emissions to less than 18.34 pounds per hour from the aggregate dryer and the RAP dryer. Additionally, the throughput of recycled asphalt pavement (RAP) to the RAP dryer shall be limited to 1,769,520 tons per twelve (12) consecutive month period, rolled on a monthly basis so that source-wide total HAP emissions are limited to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply. These limits will also render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The fugitive dust control plan for this source includes the following:

Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:

Paved roads and parking lots:

- (1) power brooming while wet either from rain or application of water on an as needed basis.

Unpaved roads and parking lots:

- (1) paving with asphalt;
- (2) treating with emulsified asphalt on an as needed basis;

- (3) treating with water on an as needed basis;
- (4) double chip and seal the road surface and maintained on an as needed basis.

Fugitive particulate matter emissions from aggregate stockpiles shall be controlled by one or more of the following methods on an as needed basis:

- (1) maintaining minimum size and number of stock piles of aggregate;
- (2) treating around the stockpile area with emulsified asphalt;
- (3) treating around the stockpile area with water;
- (4) treating the stockpiles with water.

Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following method on an as needed basis:

- (1) applying water at the feed and the intermediate points.

Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by one of the following methods:

- (1) minimize the vehicular distance between transfer points;
- (2) enclose the transfer points;
- (3) apply water on transfer points on an as needed basis.

Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. shall be controlled by one of the following methods:

- (1) tarping the aggregate hauling vehicles;
- (2) maintain vehicle bodies in a condition to prevent leakage;
- (3) spray the aggregates with water;
- (4) maintain a 10 MPH speed limit in the yard.

Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:

- (1) reduce free fall distance to a minimum;
- (2) reduce the rate of discharge of the aggregate;
- (3) spray the aggregate with water on an as needed basis.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The operation of the RAP dryer/burner and mixer will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### **326 IAC 6-3-2 (Process Operations)**

The RAP mixing and drying operation is not subject to the requirements of 326 IAC 6-3-2. This rule does not apply if the limitation established in the rule is not consistent with applicable limitations in 326 IAC 6-1 or 326 IAC 12. Since the applicable PM emission limit for the aggregate mixing and drying operation and the RAP mixing and drying operation established by 326 IAC 12, 40 CFR 60, Subpart I (15.45 pounds per hour), is less than the PM limit that would be established by 326 IAC 6-3-2 (72.61 pounds per hour, see Appendix A, page 6 of 9), the more stringent limit applies and the limit pursuant to 326 IAC 6-3-2 does not apply.

**326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)**

The sulfur dioxide emissions from the 75.6 MMBtu/hr RAP dryer burner burning distillate oil shall be limited to 0.5 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 0.5%. Therefore, the sulfur content of the fuel must be less than or equal to 0.5% in order to comply with this rule (See Appendix A, Page 6 of 9 for detailed calculations). The source will comply with this rule by using No. 2 distillate oil with a sulfur content of 0.5% or less. The sulfur dioxide emissions from the 75.6 MMBtu/hr burner burning re-refined waste oil shall be limited to 1.6 lb/MMBtu/hr heat input. This equates to a fuel oil sulfur content limit of 1.3%. Therefore, the sulfur content of the fuel must be less than or equal to 1.3% in order to comply with this rule (See Appendix A, Page 6 of 9 for detailed calculations). The source will comply with this rule by using re-refined waste oil with a sulfur content of 0.75% or less.

**326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)**

This source is subject to 326 IAC 7-2-1 (Reporting Requirements). This rule requires the source to submit to the Office of Air Quality upon request records of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates based on a calendar-month average.

**329 IAC 13-8 (Used Oil Requirements)**

- (a) Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:
  - (1) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
  - (2) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
  - (3) Maintain records pursuant to 329 IAC 13-8-6 (Tracking).
- (b) The waste oil burned in the RAP dryer/mixer burner shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). The burning of mixtures of used oil and hazardous waste that is regulated by 329 IAC 3.1 is prohibited at this source.

All other individual facilities State Rules cited in FESOP (F005-5503-00052), issued on December 9, 1996, continue to apply to the existing emission units of this source.

**Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The baghouse controlling the existing aggregate mixing and drying operation and the new RAP mixing and drying operation has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the aggregate dryer/burner and RAP dryer/burner baghouse stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.
  - (b) The Permittee shall take readings of the total static pressure drop across the baghouse controlling the aggregate and RAP mixing and drying operation, at least once per shift when the mixing and drying process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.
  - (c) An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/burner and the RAP dryer/burner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.
  - (d) In the event that bag failure has been observed:

- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse for the aggregate dryer, mixer, and burner and the RAP dryer, mixer, and burner must operate properly to ensure compliance with 326 IAC 12, 40 CFR 60.90, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities) and 326 IAC 2-8 (FESOP).

### Changes Proposed

The changes listed below have been made to the Federally Enforceable State Operating Permit (F005-5503-00052). It should also be noted that as of January 1, 2001, the Office of Air Management is now being referred to as the Office of Air Quality. Therefore, all references to the Office of Air Management have been revised to refer to the Office of Air Quality.

1. Section A.1 of the FESOP is revised to include the equipment description for the RAP dryer/burner and mixer as follows:

A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

- (a) one (1) aggregate counter-flow drum mixer, identified as emission unit No. 2, with a maximum capacity of ~~400~~ **450** tons per hour, equipped with one (1) natural gas fired aggregate dryer burner with a maximum rated capacity of 135 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1, one (1) draglat conveyor, three (3) feed conveyors, and one (1) screen;
- (b) cold-mix (stockpile mix) asphalt storage piles; and
- (c) **one (1) aggregate counter-flow recycled asphalt pavement (RAP) drum mixer, identified as emission unit No. 30, with a maximum capacity of 225 tons per hour, equipped with one (1) natural gas fired RAP dryer burner with a maximum rated capacity of 75.6 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.**

2. Section D.1 is revised to include the RAP mixer and dryer/burner. Since both the existing aggregate mixer and dryer/burner and the RAP mixer and dryer/burner exhaust through the same stack, identified as S-1, the emission limits that previously applied only to the aggregate mixing and drying operation now apply to both the aggregate mixing and drying operation and the RAP mixing and drying operation. Also, as a result of further review of the rule applicability criteria listed in 326 IAC 6-3-1, it has been determined that 326 IAC 6-3-2 does not apply to the aggregate mixing and drying operation or the RAP mixing and drying operation for the reasons noted on page 6 above. Therefore, this emission limitation has been removed from the FESOP.

Additionally, the portion of section D.1 originally entitled Testing Requirements has been re-named Compliance Determination Requirements since the requirements in conditions D.1.7 and D.1.8, now D.1.9 and D.1.10, are necessary to demonstrate compliance with the applicable PM, PM<sub>10</sub>, and SO<sub>2</sub> emission limits. The condition previously numbered D.1.19, Re-refined Waste Oil Usage, has been updated to include the requirements for burning used oil. The condition has been moved to the Compliance Determination Requirements section and re-numbered D.1.11.

The applicable production limits have been revised from the previous 365 consecutive day basis to a 12 consecutive month basis. Also, U.S. EPA has revised many of the pollutant emission factors applicable to this source since the original FESOP issuance date of December 9, 1996. Therefore, the fuel usage limitations have been adjusted to reflect these changes.

Section D.1 is revised to read as follows:

## **SECTION D.1 FACILITY OPERATION CONDITIONS**

one (1) aggregate counter-flow drum mixer, identified as emission unit No. 2, with a maximum capacity of ~~400~~ **450** tons per hour, equipped with one (1) natural gas fired aggregate dryer burner with a maximum rated capacity of 135 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.

one (1) draglat conveyor, three (3) feed conveyors, and one (1) screen.

**one (1) aggregate counter-flow recycled asphalt pavement (RAP) drum mixer, identified as emission unit No. 30, with a maximum capacity of 225 tons per hour, equipped with one (1) natural gas fired RAP dryer burner with a maximum rated capacity of 75.6 million (MM) British thermal units (Btu) per hour using No. 2 distillate fuel oil and re-refined waste oil as back-up fuels and one (1) baghouse with a primary dust collector for air pollution control, exhausting at one (1) stack, identified as S-1.**

### **Emissions Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 6-3] [326 IAC 12] [40 CFR Part 60.90]**

#### **D.1.1 Particulate Matter [326 IAC 12][40 CFR 60.90, Subpart I]**

**State:** Pursuant to 326 IAC 6-3 (Process Operations) and 326 IAC 2-2 (Prevention of Significant Deterioration), the particulate matter emissions from the aggregate mixing and drying operation shall not exceed ~~48.7~~ pounds per hour.

**Federal:** Pursuant to 326 IAC 12, (40 CFR Part 60.90, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the particulate matter emissions from the **aggregate and RAP** mixing and drying operations **exhausting through stack S-1**, shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf). **This is equivalent to a particulate matter emission rate of 15.45 pounds per hour.**

D.1.2 Particulate Matter 10 Microns (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation **and the RAP mixing and drying operation, both exhausting through stack S-1**, shall not exceed ~~49.7~~ **18.34** pounds per hour, including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Opacity [326 IAC 12][40 CFR 60.90, Subpart I]

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the **aggregate and RAP** mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20 percent opacity or greater.

D.1.4 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer** shall **each** be limited to 0.5 pounds per million Btu heat input or a sulfur content of less than or equal to ~~0.49~~ **0.5** percent when using distillate oil. Also, the sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer** shall **each** be limited to 1.6 pounds per million Btu heat input or a sulfur content of less than or equal to 1.31 percent when using re-refined waste oil. This source has accepted a sulfur content limit of 0.75 percent when using re-refined waste oil.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction.

D.1.5 Natural Gas Usage [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4(1), the input of natural gas to the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer** shall be limited, in total, to ~~355.3~~ **697.0** million cubic feet (MMCF) per ~~365-day period, rolled on a daily basis~~ **twelve (12) consecutive month period, rolled on a monthly basis**. For purposes of determining compliance, **the following shall apply:**

- (a) every 1,000 gallons of No. 2 distillate fuel oil burned **in the aggregate dryer burner** shall be equivalent to ~~0.036~~ **0.0857** MMCF of natural gas based on NO<sub>x</sub> emissions and a maximum oil sulfur content of ~~0.49%~~ **0.5% such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified; and**
- (b) every 1,000 gallons of re-refined waste oil burned **in the aggregate dryer burner** shall be equivalent to ~~0.035~~ **0.0679** MMCF of natural gas based on NO<sub>x</sub> emissions and a maximum oil sulfur content of 0.75% such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified; ~~During the first 365 days of operation under this permit, the input of natural gas and natural gas equivalents shall be limited such that the total MMCF divided by the accumulated days of operation shall not exceed 0.97 MMCF per day.~~
- (c) **every 1,000 gallons of No. 2 distillate fuel oil burned in the RAP dryer burner shall be equivalent to 0.2 MMCF of natural gas based on NO<sub>x</sub> emissions and a maximum oil sulfur content of 0.5% such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified; and**
- (d) **every 1,000 gallons of re-refined waste oil burned in the RAP dryer burner shall be equivalent to 0.19 MMCF of natural gas based on NO<sub>x</sub> emissions and a maximum oil sulfur content of 0.75% such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified.**

Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.6 Re-refined Waste Oil Usage [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the input of re-refined waste oil to the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer** shall be limited, in total, to ~~1,709,754~~ **1,707, 211** U.S. gallons per ~~365-day period, rolled on a daily basis~~ **twelve (12) consecutive month period, rolled on a monthly basis** based on a maximum oil sulfur content of 0.75%. **The sulfur content of the re-refined waste oil used in the 135 MMBtu per hour burner for the aggregate dryer and the 75.6 MMBtu per hour burner for the RAP dryer shall not exceed 0.75 percent.** For purposes of determining compliance, **the following shall apply:**

- (a) every 1,000 gallons of No. 2 distillate fuel oil burned **in the aggregate dryer burner** shall be equivalent to ~~626.0~~ **711.7** gallons of re-refined waste oil based on SO<sub>2</sub> emissions and a maximum sulfur content of ~~0.49%~~ **0.5% such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified; and**
- (b) every MMCF of natural gas burned **in the aggregate dryer burner or in the RAP dryer burner** shall be equivalent to 5.4 gallons of re-refined waste oil based on SO<sub>2</sub> emissions such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified. ~~During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 4,684 U.S. gallons per day.~~
- (c) every 1,000 gallons of No. 2 distillate fuel oil burned in the RAP dryer burner shall be equivalent to **643.7** gallons of re-refined waste oil based on SO<sub>2</sub> emissions and a maximum sulfur content of **0.5%** such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.7 Recycled Asphalt Pavement (RAP) Throughput [326 IAC 2-8-4]**

Pursuant to 326 IAC 2-8-4(1), the throughput of recycled asphalt pavement (RAP) to the RAP dryer shall be limited to **1,769,520 tons per twelve (12) consecutive month period, rolled on a monthly basis.** Therefore, the requirements of 326 IAC 2-7 will not apply.

**D.1.8 Preventive Maintenance [326 IAC 2-8-4(9)]**

**A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.**

**Testing Requirements [326 IAC 2-8-4(3)] Compliance Determination Requirements**

**D.1.79 Particulate Matter [326 IAC 12][40 CFR 60, 40 CFR 51]**

During the period between 18 and 24 months after issuance of this permit, the Permittee shall perform PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

**D.1.810 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 12][40 CFR 60]**

The Permittee shall test for:

- (a) Sulfur content of oil burned as fuel by the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer** using 40 CFR Part 60, Appendix A, Method 19 for each load of oil delivered; or

- (b) Sulfur dioxide emissions from the 135 million Btu per hour burner for the aggregate dryer **and the 75.6 million Btu per hour burner for the RAP dryer**, using 40 CFR Part 60, Appendix A, Method 6 each time a test to comply with Condition D.1.6 is performed.

Sulfur content tests may be made by the oil supplier.

**D.1.1011 ~~Re-refined Waste Oil Usage~~ Used Oil Requirements [329 IAC 13-8]**

~~The burning of waste oil in the aggregate dryer burner shall comply with 329 IAC 13 (standards for the management of waste oil). The burning of hazardous waste, as defined by 40 CFR 261, and the burning of used oil that has been mixed with hazardous waste is prohibited at this facility.~~ Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (1) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (2) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (3) Maintain records pursuant to 329 IAC 13-8-6 (Tracking).
- (4) The waste oil burned in the aggregate dryer/mixer burner and the RAP dryer/mixer burner shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). The burning of mixtures of used oil and hazardous waste that is regulated by 329 IAC 3.1 is prohibited at this source.

**Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

**D.1.912 Daily Visible Emissions Notations**

Daily visible emission notations of the conveyors, transfer points, aggregate storage piles, unpaved roads, and the **aggregate and RAP** mixing and drying operations stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

**D.1.103 Pressure Drop Readings**

The Permittee shall take readings of the total static pressure drop across the baghouse controlling the **aggregate and RAP** mixing and drying operation, at least once a day when the mixing and drying process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with condition C.11 - Pressure Gauge Specifications, be subject to approval by IDEM, OAMQ, and shall be calibrated at least once every six (6) months.

~~D.1.11 Preventive Maintenance [326 IAC 2-8-4(9)]~~

~~A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this source.~~

**D.1.124 Preventive Inspections**

The following inspections shall be performed when the **aggregate and RAP** mixing and drying operation is operating in accordance with the Preventive Maintenance Plan prepared pursuant to Condition B.13:

Daily (during operating season):

- (a) Check trickle valve (if applicable) for free operation.

Monthly (during operating season):

- (a) Check to see the tubes (if applicable) are not clogged or worn;
- (b) Check to see the settling chamber (if applicable) has no undue amount of accumulation;
- (c) Check the duct work for holes, wear, and tightness; and
- (d) Check the cyclone (if applicable) for wear.

Appropriate corrective actions shall be taken in accordance with Condition C.12.

**D.1.135 Control Equipment Failure Detection**

In the event that failure of the control equipment has been observed:

- (a) The operation will be shut down as soon as practicable, as indicated in the Preventive Maintenance plan, until the controls have been repaired.
- (b) Based upon the findings of the inspection, any additional corrective actions will be devised within twelve (12) hours of discovery and will include a timetable for completion.

**D.1.146 Particulate Matter**

Pursuant to CP-005-2331, issued on April 14, 1992, the baghouse controlling the aggregate dryer **and RAP dryer** emissions shall be in operation at all times when the asphalt plant is in operation.

**D.1.157 Fuel Oil Sampling and Analysis [326 IAC 3-3]**

Oil samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. The Permittee shall analyze the oil sample to determine the sulfur content of the oil in accordance with 326 IAC 3-3-4. If a partially empty fuel tank is refilled, a new sample and analysis is required upon filling. Vendor analysis of each load delivered is acceptable, in lieu of the above, if accompanied by a certification.

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**D.1.168 Operational Parameters**

- (a) The Permittee shall maintain a daily record for the baghouse controlling particulate matter emissions from **asphalt aggregate and RAP** mixing and drying operations of the following values **to document compliance with Conditions D.1.12 and D.1.13:**

- ~~(a)~~(1) Baghouse inlet temperature;
- ~~(b)~~(2) Inlet and outlet differential static pressure;
- ~~(c)~~(3) Visible observations;

- ~~(d)~~(4) Checklist with dates and initials for each preventive action performed; and
- ~~(e)~~(5) Records of corrective actions.

- (b) **To document compliance with Condition D.1.14, the Permittee shall maintain records of the results of the inspections required under Condition D.1.14.**

**D.1.179** Natural Gas Usage

- (a) **To document compliance with Condition D.1.5, ~~G~~complete and sufficient records shall be kept to establish compliance with the natural gas usage limit established in this permit and contain a minimum of the following:**
  - (1) Calendar dates covered in the compliance determination period; and
  - (2) ~~Daily~~ **Monthly** usage and calculated natural gas equivalent.

**D.1.1820** Distillate and Residual Fuel Oil Usage

- (a) **To document compliance with Conditions D.1.4 and D.1.6, ~~G~~complete and sufficient records shall be kept to establish compliance with the re-refined waste oil usage limits and sulfur dioxide emission limit established in this permit and contain a minimum of the following:**
  - (1) Calendar dates covered in the compliance determination period;
  - (2) ~~Daily~~ **Monthly** usage and calculated re-refined waste oil equivalent;
  - (3) A certification (if available), signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
  - (4) Fuel supplier certifications (if available).
- (b) The supplier certification (if available) shall contain, as a minimum, the following:
  - (1) The name of the oil supplier; and
  - (2) A statement from the oil supplier that certifies the sulfur content and heat content of the fuel oil.

**D.1.21** Recycled Asphalt Pavement (RAP) Throughput

- (a) **To document compliance with condition D.1.7, complete and sufficient records shall be kept to establish compliance with the recycled asphalt pavement (RAP) throughput limit for the RAP dryer established in this permit and contain a minimum of the following:**
  - (1) **Calendar dates covered in the compliance determination period; and**
  - (2) **Monthly RAP throughput to the RAP dryer.**

**D.1.202** Quarterly Reporting

A quarterly summary to document compliance with operation conditions numbers ~~D.1.4~~, D.1.5, ~~and D.1.6~~, **and D.1.7** shall be submitted, to the address listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

3. Condition D.2.2 has been revised so that the VOC emission limit is decreased from 78.78 tons per year to 72.16 tons per year due to the increase in VOC emissions from the RAP dryer burner. Also, the definition of the gelled asphalt has been revised so that the equivalent usage limit is expressed as usage of gelled asphalt with VOC solvent liquid binder. The revised condition reads as follows:

**D.2.2 Cold-Mix (Stockpile Mix) Asphalt Concrete Usage**

~~The VOC emissions from the production of cold mix (stockpile mix) asphalt shall be limited to 78.78 tons per twelve (12) consecutive month period, rolled on a monthly basis. This is equivalent to 14,319 tons of gelled asphalt binder used per twelve (12) consecutive month period in the production of cold mix (stockpile mix) asphalt based on 1.0% diluent present in the gelled asphalt binder.~~ **Gelled asphalt with VOC solvent liquid binder used in the production of cold mix asphalt shall not exceed 2,886 tons of VOC solvent per twelve (12) consecutive month period. This is equivalent to limiting the VOC emitted from solvent use to 72.16 tons per twelve (12) consecutive month period, based on the following definition:**

**Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.**

Therefore, the requirements of 326 IAC 2-7 will not apply.

The record keeping requirements in condition D.2.3 have also been revised to correspond with the revised VOC limit above. The revised condition reads as follows:

**D.2.3 Operational Parameters Record keeping Requirements**

**To document compliance with Condition D.2.2,** ~~the Permittee shall maintain records at the facility of the amount of cold mix (stockpile mix) asphalt concrete produced each month. in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and~~ **The records shall be complete and sufficient to establish compliance with the VOC usage emission limit established in this permit Condition D.2.2. The records shall contain a minimum of the following:**

- (a) ~~cold mix (stockpile mix) asphalt produced in current month;~~ **Calendar dates covered in the compliance determination period;**
- (b) ~~cold mix (stockpile mix) asphalt produced last twelve (12) months;~~ **Gelled asphalt binder usage per month since the last compliance determination period;**
- (c) ~~type of asphalt used;~~ **and VOC solvent content by weight of the gelled asphalt binder used each month; and**
- (d) ~~percent fuel oil in asphalt.~~ **Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.**

The records shall be maintained for a minimum period of 36 months and made available upon request of the Office of Air ~~Management~~ **Quality (OAMQ).**

4. The quarterly report forms for the fuel usage limitations and the gelled asphalt binder limit have been revised as shown on the following three pages. Also, an additional report form has been added for the RAP throughput limitation for the RAP dryer.

**Conclusion**

This permit revision shall be subject to the conditions of the attached proposed Significant FESOP Revision No. 005-15124-00052.

sulfur content of No. 2 distillate fuel not to exceed 0.495%; sulfur content of re-refined waste oil not to exceed 0.75%; and 1,709,754 **1,707,211** gallons of re-refined waste oil and re-refined waste oil equivalent per last 12 **consecutive** month period. For purposes of determining compliance, ~~every 1,000~~ gallons of No. 2 distillate fuel oil burned shall be equivalent to 626.0 gallons of re-refined waste oil based on SO<sub>2</sub> emissions and a maximum sulfur content of 0.49% and every MCFG of natural gas burned shall be equivalent to 5.4 gallons of re-refined waste oil based on SO<sub>2</sub> emissions **with this limit, the fuel equivalency ratios in condition D.1.6(a) through (c) shall be used** such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified. During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 4.684 U.S. gallons per day.

[illegible]

YEAR: \_\_\_\_\_

Month	Column 1		Column 2		Column 1 + Column 2	
	Re-refined waste oil and equivalent usage this month (gallons)		Re-refined waste oil and equivalent usage previous 11 months (gallons)		12 month total Re-refined waste oil and equivalent usage (gallons)	
	Waste Oil	Equiv.	Waste Oil	Equiv.	Waste Oil	Equiv.
Month 1						
Month 2						
Month 3						

9 No deviation occurred in this ~~month~~ quarter.

9 Deviation/s occurred in this ~~month~~ quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

[illegible]

YEAR: \_\_\_\_\_

Month	Column 1		Column 2		Column 1 + Column 2	
	Natural gas and equivalent usage this month (MMCF)		Natural gas and equivalent usage previous 11 months (MMCF)		12 month total Natural gas and equivalent usage (MMCF)	
	Natural Gas	Equiv.	Natural Gas	Equiv.	Natural Gas	Equiv.
Month 1						
Month 2						
Month 3						

9 No deviation occurred in this ~~month~~ quarter.

9 Deviation/s occurred in this ~~month~~ quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT QUALITY COMPLIANCE DATA SECTION

### FESOP Quarterly Report

Source Name: Milestone Contractors, L.P.  
Source Address: 5245 N. Indianapolis Road, Columbus, Indiana 47201  
FESOP No.: F005-5503-00052  
Facility: cold-mix (stockpile mix) asphalt  
Parameter: volatile organic compounds (VOC)  
Limit: ~~14,319 tons of gelled asphalt binder in stockpile mix per last 12-month period.~~  
**Gelled asphalt with VOC solvent liquid binder used in the production of cold mix asphalt shall not exceed 2,886 tons of VOC solvent per twelve (12) consecutive month period. This is equivalent to limiting the VOC emitted from solvent use to 72.16 tons per twelve (12) consecutive month period.**

**Month:** \_\_\_\_\_ **Year:** \_\_\_\_\_

Month	Gelled Asphalt Binder Usage This Month (Tons)	Gelled Asphalt Binder Usage Per Last 12 Months (Tons)

**YEAR:** \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Total VOC Solvent Usage This Month (tons)	Total VOC Solvent Usage Previous 11 Months (tons)	12 Month Total VOC Solvent Usage (tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this ~~month~~ **quarter**.

9 Deviation/s occurred in this ~~month~~ **quarter**.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

**Source Name:** Milestone Contractors, L.P.  
**Source Address:** 5245 N. Indianapolis Road, Columbus, Indiana 47201  
**FESOP No.:** F005-5503-00052  
**Facility:** RAP dryer  
**Parameter:** Total HAPs  
**Limit:** The throughput of recycled asphalt pavement (RAP) to the RAP dryer shall be limited to 1,769,520 tons per twelve (12) consecutive month period, rolled on a monthly basis.

**YEAR:** \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	RAP Throughput This Month (tons)	RAP Throughput Previous 11 Months (tons)	12 Month Total RAP Throughput (tons)
Month 1			
Month 2			
Month 3			

- 9      No deviation occurred in this quarter.
- 9      Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title/Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

Company Name:

Milestone Contractors, L.P.

Plant Location:

5245 North Indianapolis Road, Columbus, Indiana 47201

County:

Bartholomew

Date Received:

December 7, 2001

Permit Reviewer:

Trish Earls

**\*\* RAP dryer burner\*\***

The following calculations determine the amount of emissions created by natural gas combustion, from the RAP dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1 and 1.4-2.

<b>Criteria Pollutant:</b>	$\frac{75.6 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{1000 \text{ Btu/cf} \times 2,000 \text{ lb/ton}}$	* Ef (lb/MMcf) = (ton/yr)
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<b>P M:</b>	1.9 lb/MMcf =	<b>0.63 ton/yr</b>
<b>P M-10:</b>	7.6 lb/MMcf =	<b>2.52 ton/yr</b>
<b>S O 2:</b>	0.6 lb/MMcf =	<b>0.20 ton/yr</b>
<b>N O x:</b>	100.0 lb/MMcf =	<b>33.11 ton/yr</b>
<b>V O C:</b>	5.5 lb/MMcf =	<b>1.82 ton/yr</b>
<b>C O:</b>	84.0 lb/MMcf =	<b>27.81 ton/yr</b>

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil @ 0.5 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-3.

<b>Criteria Pollutant:</b>	$\frac{75.6 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}}{140,000 \text{ Btu/gal} \times 2,000 \text{ lb/ton}}$	* Ef (lb/1,000 gal) = (ton/yr)
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<b>P M:</b>	2.0 lb/1000 gal =	<b>4.73 ton/yr</b>
<b>P M-10:</b>	3.3 lb/1000 gal =	<b>7.81 ton/yr</b>
<b>S O 2:</b>	71.0 lb/1000 gal =	<b>167.93 ton/yr</b>
<b>N O x:</b>	20.0 lb/1000 gal =	<b>47.30 ton/yr</b>
<b>V O C:</b>	0.34 lb/1000 gal =	<b>0.80 ton/yr</b>
<b>C O:</b>	5.0 lb/1000 gal =	<b>11.83 ton/yr</b>

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.75 % sulfur, 1.020 % ash, based on 8760 hours of use and US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, and 1.11-3.

<b>Criteria Pollutant:</b>	$\frac{75.6 \text{ MMBtu/hr} \times 8760 \text{ hr/yr}}{120,000 \text{ Btu/gal} \times 2000 \text{ lb/ton}}$	* Ef (lb/1000 gal) = (ton/yr)
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<b>P M:</b>	65.3 lb/1000 gal =	<b>180.13 ton/yr</b>
<b>P M-10:</b>	52.0 lb/1000 gal =	<b>143.54 ton/yr</b>
<b>S O 2:</b>	110.3 lb/1000 gal =	<b>304.22 ton/yr</b>
<b>N O x:</b>	19.0 lb/1000 gal =	<b>52.43 ton/yr</b>
<b>V O C:</b>	1.0 lb/1000 gal =	<b>2.76 ton/yr</b>
<b>C O:</b>	5.0 lb/1000 gal =	<b>13.80 ton/yr</b>

The maximum potential emissions from the aggregate dryer burner due to fuel combustion are the following:

<b>Criteria Pollutant:</b>		<b>Worst Case Fuel</b>
<b>P M:</b>	<b>180.13 ton/yr</b>	Re-refined Waste Oil
<b>P M-10:</b>	<b>143.54 ton/yr</b>	Re-refined Waste Oil
<b>S O 2:</b>	<b>304.22 ton/yr</b>	Re-refined Waste Oil
<b>N O x:</b>	<b>52.43 ton/yr</b>	Re-refined Waste Oil
<b>V O C:</b>	<b>2.76 ton/yr</b>	Re-refined Waste Oil
<b>C O:</b>	<b>27.81 ton/yr</b>	Natural Gas

**\*\* RAP drying: drum-mix plant \*\***

The following calculations determine the amount of worst case emissions created by aggregate drying before controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-5 and 11.1-10 for a drum mix dryer which has the capability of combusting either fuel oil or natural gas:

Pollutant:	Ef	lb/ton x	225	ton/hr x	8,760 hr/yr
			2,000	lb/ton	

**Criteria Pollutant:**

<b>P M:</b>	28	lb/ton =	<b>27,594.00 ton/yr</b>
<b>P M-10:</b>	6.5	lb/ton =	<b>6,405.75 ton/yr</b>
<b>VOC:</b>	8.72E-03	lb/ton =	<b>8.59 ton/yr</b>

The VOC emission factor represents the sum of the HAP emission factors from the dryer which were assumed to be VOC.

Pollutant:	Ef	lb/ton x	50	ton/hr x	8,760 hr/yr
			2,000	lb/ton	

**Criteria Pollutant:**

<b>P M:</b>	28	lb/ton =	<b>6,132.00 ton/yr</b>
<b>P M-10:</b>	6.5	lb/ton =	<b>1,423.50 ton/yr</b>
<b>VOC:</b>	8.72E-03	lb/ton =	<b>1.91 ton/yr</b>

These emissions represent the increase in emissions from drying in the existing aggregate dryer for which the aggregate throughput is increased from 400 tons/hr to 450 tons/hr.

The VOC emission factor represents the sum of the HAP emission factors from the dryer which were assumed to be VOC.

**\*\* summary of emissions from this modification before controls \*\***

Criteria Pollutants:

<b>P M:</b>	<b>33,906.13 ton/yr</b>	
<b>P M-10:</b>	<b>7,972.79 ton/yr</b>	
<b>S O 2:</b>	<b>304.22 ton/yr</b>	
<b>N O x:</b>	<b>52.43 ton/yr</b>	
<b>V O C:</b>	<b>13.26 ton/yr</b>	(VOCs include HAPs from RAP drying operation)
<b>C O:</b>	<b>27.81 ton/yr</b>	

**\*\* source emissions after controls \*\***

Pursuant to the FESOP program, this facility must limit PM-10, SO<sub>2</sub>, NO<sub>x</sub> and VOC emissions to less than 100.0 tons per year. Consequently, SO<sub>2</sub> emissions from the aggregate dryer and RAP dryer must be limited to 94.11 tons per year (99.0 ton/yr - 4.89 tons/yr from the heaters). Also, NO<sub>x</sub> emissions from the aggregate dryer and RAP dryer must be limited to 97.58 tons per year (99.0 tons/yr - 1.42 tons/yr from the heaters).

\* Emissions of PM and PM-10 from aggregate drying and RAP drying operations are controlled with a 99.920 % control efficiency.

The following calculations determine the amount of emissions created by natural gas combustion in the aggregate dryer and RAP dryer based on a fuel usage limitation of 697,000,000 cf

**Natural Gas:**  $\frac{697,000 \text{ MMcf/yr}}{2,000 \text{ lb/ton}}$  \* Ef (lb/MMcf) = (ton/yr)

<b>P M:</b>	1.9 lb/MMcf =	<b>5.3E-04 ton/yr *</b>
<b>P M-10:</b>	7.6 lb/MMcf =	<b>2.1E-03 ton/yr *</b>
<b>S O 2:</b>	0.6 lb/MMcf =	<b>0.21 ton/yr</b>
<b>N O x:</b>	280.0 lb/MMcf =	<b>97.58 ton/yr</b>
<b>V O C:</b>	5.5 lb/MMcf =	<b>1.92 ton/yr</b>
<b>C O:</b>	84.0 lb/MMcf =	<b>29.27 ton/yr</b>

Note: the worst case emission factor for NO<sub>x</sub> is used to calculate limit for aggregate dryer and RAP dryer.

The following calculations determine the amount of emissions created by No.2 distillate fuel oil @ 0.5 % sulfur based on a fuel usage limitation of 2,397,707 gal/yr:

**No. 2 Distillate Oil:**  $\frac{2,397,707 \text{ gal/yr}}{2,000 \text{ lb/ton}}$  \* Ef (lb/1,000 gal) = (ton/yr)

<b>P M:</b>	2.0 lb/1000 gal =	<b>1.9E-03 ton/yr *</b>
<b>P M-10:</b>	3.3 lb/1000 gal =	<b>3.2E-03 ton/yr *</b>
<b>S O 2:</b>	78.5 lb/1000 gal =	<b>94.11 ton/yr</b>
<b>N O x:</b>	24.0 lb/1000 gal =	<b>28.77 ton/yr</b>
<b>V O C:</b>	0.34 lb/1000 gal =	<b>0.41 ton/yr</b>
<b>C O:</b>	5.0 lb/1000 gal =	<b>5.99 ton/yr</b>

Note: the worst case emission factor for SO<sub>2</sub> is used to calculate limit for aggregate dryer and RAP dryer.

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.75 % sulfur based on a fuel usage limitation of 1,707,211 gal/yr:

**Waste Oil:**  $\frac{1,707,211 \text{ gal/yr}}{2000 \text{ lb/ton}}$  \* Ef (lb/1000 gal) = (ton/yr)

<b>P M:</b>	65.3 lb/1000 gal =	<b>0.04 ton/yr *</b>
<b>P M-10:</b>	52.0 lb/1000 gal =	<b>0.04 ton/yr *</b>
<b>S O 2:</b>	110.3 lb/1000 gal =	<b>94.11 ton/yr</b>
<b>N O x:</b>	19.0 lb/1000 gal =	<b>16.22 ton/yr</b>
<b>V O C:</b>	1.0 lb/1000 gal =	<b>0.85 ton/yr</b>
<b>C O:</b>	5.0 lb/1000 gal =	<b>4.27 ton/yr</b>

**Criteria Pollutant:**

<b>P M:</b>	<b>0.04 ton/yr *</b>	<b>Worst Case Fuel</b>
<b>P M-10:</b>	<b>0.04 ton/yr *</b>	Re-refined Waste Oil
<b>S O 2:</b>	<b>94.11 ton/yr</b>	Re-refined Waste Oil
<b>N O x:</b>	<b>97.58 ton/yr</b>	No. 2 Fuel Oil / Re-refined Waste Oil
<b>V O C:</b>	<b>1.92 ton/yr</b>	Natural Gas
<b>C O:</b>	<b>29.27 ton/yr</b>	Natural Gas

**\*\* source emissions after controls \*\***

**Fuel Usage Limitations**

Fuel: Natural gas (in aggregate dryer and RAP dryer)

$$\frac{97.58 \text{ tons NOx/year limited}^*}{280.00 \text{ lb/MMCF}} \times 2000 \text{ lb/ton} = 697.00 \frac{\text{MMCF}}{\text{year limited}}$$

(from existing aggregate dryer and RAP dryer)

Fuel: #2 distillate fuel oil (in aggregate dryer and RAP dryer)

$$\frac{94.11 \text{ tons SO}_2\text{/year limited}^*}{78.50 \text{ lb/1000 gallons}} \times 2000 \text{ lb/ton} = 2397.71 \frac{\text{Kgals}}{\text{year limited}}$$

(from existing dryer and RAP dryer)

Fuel: re-refined waste oil (in aggregate dryer and RAP dryer)

$$\frac{94.11 \text{ tons SO}_2\text{/year limited}^*}{110.25 \text{ lb/1000 gallons}} \times 2000 \text{ lb/ton} = 1707.21 \frac{\text{Kgals}}{\text{year limited}}$$

(from existing dryer and RAP dryer)

Fuel equivalence for natural gas in the aggregate dryer is determined from the limiting pollutant, NOx, as follows:

$$\frac{24.0 \text{ lb/1000 gal}}{280.0 \text{ lb/MMcf}} = 0.0857 \text{ million cubic feet (MMcf) per kgal No. 2 distillate oil (i.e., every 1000 gallons of No. 2 oil burned is equivalent to 0.0857 MMcf of natural gas burned, based on NOx emissions.)}$$

$$\frac{19.0 \text{ lb/1000 gal}}{280.0 \text{ lb/MMcf}} = 0.0679 \text{ million cubic feet (MMcf) per kgal waste oil (i.e., every 1000 gallons of waste oil burned is equivalent to 0.0679 MMcf of natural gas burned, based on NOx emissions.)}$$

Fuel equivalence for natural gas in the RAP dryer is determined from the limiting pollutant, NOx, as follows:

$$\frac{20.0 \text{ lb/1000 gal}}{100.0 \text{ lb/MMcf}} = 0.2000 \text{ million cubic feet (MMcf) per kgal No. 2 distillate oil (i.e., every 1000 gallons of No. 2 oil burned is equivalent to 0.2 MMcf of natural gas burned, based on NOx emissions.)}$$

$$\frac{19.0 \text{ lb/1000 gal}}{100.0 \text{ lb/MMcf}} = 0.1900 \text{ million cubic feet (MMcf) per kgal waste oil (i.e., every 1000 gallons of waste oil burned is equivalent to 0.19 MMcf of natural gas burned, based on NOx emissions.)}$$

Fuel equivalence for re-refined waste oil in the aggregate dryer is determined from the limiting pollutant, SO2, as follows:

$$\frac{0.6 \text{ lb/MMcf}}{110.3 \text{ lb/1000 gal}} = 5.4 \text{ gallons per million cubic feet (MMcf) natural gas (i.e., every 1 MMcf natural gas burned is equivalent to 5.4 gallons of oil burned, based on SO2 emissions)}$$

$$\frac{78.5 \text{ lb/1000 gal}}{110.3 \text{ lb/1000 gal}} = 711.7 \text{ gallons per 1000 gallons No. 2 distillate oil (i.e., every 1000 gallons of No. 2 oil burned is equivalent to 712 gallons of waste oil burned, based on SO2 emissions)}$$

Fuel equivalence for re-refined waste oil in the RAP dryer is determined from the limiting pollutant, SO2, as follows:

$$\frac{0.6 \text{ lb/MMcf}}{110.3 \text{ lb/1000 gal}} = 5.4 \text{ gallons per million cubic feet (MMcf) natural gas (i.e., every 1 MMcf natural gas burned is equivalent to 5.4 gallons of oil burned, based on SO2 emissions)}$$

$$\frac{71.0 \text{ lb/1000 gal}}{110.3 \text{ lb/1000 gal}} = 643.7 \text{ gallons per 1000 gallons No. 2 distillate oil (i.e., every 1000 gallons of No. 2 oil burned is equivalent to 643.7 gallons of waste oil burned, based on SO2 emissions)}$$

**\*\* source emissions after controls \*\***

misc. combustion:		nonfugitive	
<b>P M:</b>	0.14 ton/yr x	100% emitted after controls =	<b>0.14 ton/yr</b>
<b>P M-10:</b>	0.23 ton/yr x	100% emitted after controls =	<b>0.23 ton/yr</b>

aggregate drying:		nonfugitive	
<b>P M:</b>	55,188.00 ton/yr x	0.08% emitted after controls =	<b>44.15 ton/yr</b>
<b>P M-10:</b>	12,811.50 ton/yr x	0.08% emitted after controls =	<b>10.25 ton/yr</b>
<b>VOC:</b>	17.18 ton/yr x	100% emitted after controls =	<b>17.18 ton/yr</b>

*RAP drying:		nonfugitive	
<b>P M:</b>	27,594 ton/yr x	0.08% emitted after controls =	<b>19.82 ton/yr</b>
<b>P M-10:</b>	6,406 ton/yr x	0.08% emitted after controls =	<b>4.60 ton/yr</b>
<b>VOC:</b>	8.59 ton/yr x	90% emitted after controls =	<b>7.71 ton/yr</b>

\* Source must limit throughput of RAP to RAP dryer to 202 tons/hr to limit total HAP emissions to less than 25 tons per year. Therefore emissions after control also include this limit.

conveying & handling:		fugitive	
<b>P M:</b>	4.04 ton/yr x	50% emitted after controls =	<b>2.02 ton/yr</b>
<b>P M-10:</b>	1.91 ton/yr x	50% emitted after controls =	<b>0.96 ton/yr</b>

unpaved roads:		fugitive	
<b>P M:</b>	163.84 ton/yr x	50% emitted after controls =	<b>81.92 ton/yr</b>
<b>P M-10:</b>	32.74 ton/yr x	50% emitted after controls =	<b>16.37 ton/yr</b>

storage piles:		fugitive	
<b>P M:</b>	0.46 ton/yr x	50% emitted after controls =	<b>0.23 ton/yr</b>
<b>P M-10:</b>	0.16 ton/yr x	50% emitted after controls =	<b>0.08 ton/yr</b>

cold mix VOC storage:		fugitive	
<b>VOC:</b>	985.50 ton/yr x	7% emitted after controls =	<b>72.16 ton/yr*</b>

\* This is equivalent to 2,886 tons of gelled asphalt binder solvent used per year based on 2.5% of VOC solvent evaporating.

**\*\* summary of source emissions after controls \*\***

Criteria Pollutant:	Non-Fugitive	Fugitive	Total
<b>PM:</b>	<b>64.15 ton/yr</b>	<b>84.17 ton/yr</b>	<b>148.32 ton/yr</b>
<b>PM-10:</b>	<b>15.12 ton/yr</b>	<b>17.41 ton/yr</b>	<b>32.52 ton/yr</b>
<b>S O 2:</b>	<b>99.00 ton/yr</b>	<b>0.00 ton/yr</b>	<b>99.00 ton/yr</b>
<b>N O x:</b>	<b>99.00 ton/yr</b>	<b>0.00 ton/yr</b>	<b>99.00 ton/yr</b>
<b>V O C:</b>	<b>26.84 ton/yr</b>	<b>72.16 ton/yr</b>	<b>99.00 ton/yr</b>
<b>C O:</b>	<b>29.65 ton/yr</b>	<b>0.00 ton/yr</b>	<b>29.65 ton/yr</b>

**\*\* miscellaneous \*\***

**326 IAC 7 Compliance Calculations:**

The following calculations determine the maximum sulfur content of distillate fuel oil allowable by 326 IAC 7:

$$\begin{aligned} 0.5 \text{ lb/MMBtu} \times 140,000 \text{ Btu/gal} &= 70 \text{ lb/1000gal} \\ 70 \text{ lb/1000gal} / 142 \text{ lb/1000 gal} &= 0.5 \% \end{aligned}$$

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.

The following calculations determine the maximum sulfur content of waste (residual) oil allowable by 326 IAC 7:

$$\begin{aligned} 1.6 \text{ lb/MMBtu} \times 120,000 \text{ Btu/gal} &= 192 \text{ lb/1000gal} \\ 192 \text{ lb/1000gal} / 147 \text{ lb/1000 gal} &= 1.3 \% \end{aligned}$$

Sulfur content must be less than or equal to 1.3% to comply with 326 IAC 7.

**326 IAC 6-3-2 Compliance Calculations:**

The following calculations determine compliance with 326 IAC 6-3-2 for process weight rates in excess of 30 tons per hour:

$$\text{limit} = 55 * (675^{0.11}) - 40 = 72.61 \text{ lb/hr or } 318.04 \text{ ton/yr}$$

Note: process weight includes 450 tons/hr for aggregate dryer and 225 tons/hr for RAP dryer.

Since the emission limit pursuant to Subpart I of 67.66 tons per year, is more stringent than this limit, the limit pursuant to 326 IAC 6-3-2 does not apply. The emission limit pursuant to Subpart I shall also render the requirements of 326 IAC 2-2 (PSD) not applicable.

**PM-10 Emission Limit:**

$$\begin{aligned} (99.0 \text{ tons PM-10/yr} - 18.67 \text{ tons PM-10/yr from other sources}) \\ = 80.33 \text{ tons PM-10/yr} = 18.34 \text{ lbs/hr} \end{aligned}$$

PM-10 emissions from the aggregate dryer and RAP dryer are controlled to 14.85 tons/yr < 80.33 tons/yr (Will comply)  
Based on a maximum asphalt mix throughput of 450 tons/hr, this emission limit is equivalent to 0.04 lb PM10 per ton of asphalt mix.

**40 CFR Part 60.90, Subpart I (Standards of Performance for Hot Mix Asphalt Plants) Compliance Calculations:**

The following calculations determine compliance with NSPS, which limits stack emissions from asphalt plants to 0.04 gr/dscf:

$$\frac{63.97 \text{ ton/yr} * 2000 \text{ lb/ton} * 7000 \text{ gr/lb}}{525,600 \text{ min/yr} * 45,056 \text{ dscf/min}} = 0.038 \text{ gr/dscf} \quad (\text{will comply})$$

Allowable particulate emissions under NSPS equate to 67.66 tons per year. 15.45 lbs/hr

Note:

$$\begin{aligned} \text{SCFM} &= 59,307 \text{ acfm} * (460 + 68) / (460 + 235) \\ &= 45,056 \text{ scfm} \end{aligned}$$

### Hazardous Air Pollutants (HAPs)

#### \*\* RAP dryer burner\*\*

The following calculations determine the amount of HAP emissions created by the combustion of distillate fuel oil before & after controls @ 0.50 % sulfur, from the aggregate dryer burner, based on 8760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.3-11.

Hazardous Air Pollutants (HAPs):		75.6 MMBtu/hr * 8760 hr/yr	* Ef (lb/10 <sup>12</sup> Btu) = (ton/yr)	
		2,000 lb/ton		
			Potential To Emit	Limited Emissions
<b>Arsenic:</b>	4 lb/10 <sup>12</sup> Btu =		1.32E-03 ton/yr	1.06E-06 ton/yr
<b>Beryllium:</b>	3 lb/10 <sup>12</sup> Btu =		9.93E-04 ton/yr	7.95E-07 ton/yr
<b>Cadmium:</b>	3 lb/10 <sup>12</sup> Btu =		9.93E-04 ton/yr	7.95E-07 ton/yr
<b>Chromium:</b>	3 lb/10 <sup>12</sup> Btu =		9.93E-04 ton/yr	7.95E-07 ton/yr
<b>Lead:</b>	9 lb/10 <sup>12</sup> Btu =		2.98E-03 ton/yr	2.38E-06 ton/yr
<b>Manganese:</b>	6 lb/10 <sup>12</sup> Btu =		1.99E-03 ton/yr	1.59E-06 ton/yr
<b>Mercury:</b>	3 lb/10 <sup>12</sup> Btu =		9.93E-04 ton/yr	7.95E-07 ton/yr
<b>Nickel:</b>	3 lb/10 <sup>12</sup> Btu =		9.93E-04 ton/yr	7.95E-07 ton/yr
<b>Selenium:</b>	15 lb/10 <sup>12</sup> Btu =		4.97E-03 ton/yr	3.97E-06 ton/yr
Total HAPs =			1.13E-02 ton/yr	9.01E-06 ton/yr

The following calculations determine the amount of emissions created by re-refined waste oil combustion, from asphalt heating, @ 0.0072 % lead, based on 8760 hours of use and US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, and 1.11-3.

Hazardous Air Pollutants (HAPs):		75.6 MMBtu/hr * 8760 hr/yr	* Ef (lb/1000 gal) = (ton/yr)	
		120,000 Btu/gal * 2000 lb/ton * 1000 gal/kgal		
			Potential To Emit	Limited Emissions
<b>Lead:</b>	0.396 lb/1000 gal =		1.09 ton/yr	8.74E-04 ton/yr

#### \*\* RAP drying: drum-mix plant \*\*

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-10 for a drum mix dryer which can be fired with either fuel oil or natural gas. The HAP emission factors represent the worst case emissions (fuel oil combustion).

Pollutant:	Ef	lb/ton x	225	ton/hr x	8760 hr/yr	(Potential)
			2000	lb/ton		
Pollutant:	Ef	lb/ton x	202	ton/hr x	8760 hr/yr	(Limited)
			2000	lb/ton		

Hazardous Air Pollutants (HAPs):			Potential To Emit	Limited Emissions
<b>Benzene:</b>	3.90E-04 lb/ton =		0.38 ton/yr	0.35 ton/yr
<b>Ethylbenzene:</b>	2.40E-04 lb/ton =		0.24 ton/yr	0.21 ton/yr
<b>Formaldehyde:</b>	3.10E-03 lb/ton =		3.06 ton/yr	2.74 ton/yr
<b>Hexane:</b>	9.20E-04 lb/ton =		0.91 ton/yr	0.81 ton/yr
<b>2,2,4 Trimethylpentane:</b>	4.00E-05 lb/ton =		0.04 ton/yr	0.04 ton/yr
<b>Methyl chloroform:</b>	4.8E-05 lb/ton =		0.05 ton/yr	0.04 ton/yr
<b>Toluene:</b>	2.90E-03 lb/ton =		2.86 ton/yr	2.57 ton/yr
<b>Total Polycyclic Organic Matter (POM):</b>	8.800E-04 lb/ton =		0.87 ton/yr	0.78 ton/yr
<b>*Xylene:</b>	2.00E-04 lb/ton =		0.20 ton/yr	0.18 ton/yr
Total HAPs :			8.59 ton/yr	7.71 ton/yr

### Hazardous Air Pollutants (HAPs)

#### \* \* aggregate drying: drum-mix plant \* \*

The following calculations determine the amount of HAP emissions created by additional aggregate drying before & after control based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-10 for a drum mix dryer which can be fired with either fuel oil or natural gas. The HAP emission factors represent the worst case emissions (fuel oil combustion).

Pollutant:	Ef	lb/ton x	50	ton/hr x	8760 hr/yr		
			2000	lb/ton			
Hazardous Air Pollutants (HAPs):					Potential To Emit	Limited Emissions	
	<b>Benzene:</b>	3.90E-04	lb/ton =		0.09 ton/yr	0.09 ton/yr	
	<b>Ethylbenzene:</b>	2.40E-04	lb/ton =		0.05 ton/yr	0.05 ton/yr	
	<b>Formaldehyde:</b>	3.10E-03	lb/ton =		0.68 ton/yr	0.68 ton/yr	
	<b>Hexane:</b>	9.20E-04	lb/ton =		0.20 ton/yr	0.20 ton/yr	
	<b>2,2,4 Trimethylpentane:</b>	4.00E-05	lb/ton =		0.01 ton/yr	0.01 ton/yr	
	<b>Methyl chloroform:</b>	4.8E-05	lb/ton =		0.01 ton/yr	0.01 ton/yr	
	<b>Toluene:</b>	2.90E-03	lb/ton =		0.64 ton/yr	0.64 ton/yr	
	<b>Total Polycyclic Organic Matter (POM):</b>	8.800E-04	lb/ton =		0.19 ton/yr	0.19 ton/yr	
	<b>*Xylene:</b>	2.00E-04	lb/ton =		0.04 ton/yr	0.04 ton/yr	
				Total HAPs :	1.91 ton/yr	1.91 ton/yr	

**\*\* summary of modification HAP emissions potential to emit \*\***

Hazardous Air Pollutants (HAPs):

Arsenic:	<b>0.001</b> ton/yr
Benzene:	<b>0.470</b> ton/yr
Beryllium:	<b>0.001</b> ton/yr
Cadmium:	<b>0.001</b> ton/yr
Chromium:	<b>0.001</b> ton/yr
Ethylbenzene:	<b>0.289</b> ton/yr
Formaldehyde:	<b>3.734</b> ton/yr
Hexane:	<b>1.108</b> ton/yr
2,2,4 Trimethylpentane:	<b>0.048</b> ton/yr
Lead:	<b>1.093</b> ton/yr
Manganese:	<b>0.002</b> ton/yr
Mercury:	<b>0.001</b> ton/yr
Methyl chloroform:	<b>0.058</b> ton/yr
Nickel:	<b>0.001</b> ton/yr
Selenium:	<b>0.005</b> ton/yr
Toluene:	<b>3.493</b> ton/yr
Total POM:	<b>1.060</b> ton/yr
Xylene:	<b>0.241</b> ton/yr
<b>Total:</b>	<b>11.607 ton/yr</b>

**\*\* summary of modification HAP limited emissions \*\***

Hazardous Air Pollutants (HAPs):

Arsenic:	<b>0.000</b> ton/yr
Benzene:	<b>0.430</b> ton/yr
Beryllium:	<b>0.000</b> ton/yr
Cadmium:	<b>0.000</b> ton/yr
Chromium:	<b>0.000</b> ton/yr
Ethylbenzene:	<b>0.265</b> ton/yr
Formaldehyde:	<b>3.422</b> ton/yr
Hexane:	<b>1.015</b> ton/yr
2,2,4 Trimethylpentane:	<b>0.044</b> ton/yr
Lead:	<b>0.001</b> ton/yr
Manganese:	<b>0.000</b> ton/yr
Mercury:	<b>0.000</b> ton/yr
Methyl chloroform:	<b>0.053</b> ton/yr
Nickel:	<b>0.000</b> ton/yr
Selenium:	<b>0.000</b> ton/yr
Toluene:	<b>3.201</b> ton/yr
Total Polycyclic Organic Matter:	<b>0.971</b> ton/yr
Xylene:	<b>0.221</b> ton/yr
<b>Total:</b>	<b>9.623 ton/yr</b>